

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A semiconductor device structure, comprising:
 - a substrate defining a substantially horizontal plane;
 - a ~~common~~ source region;
 - a ~~common~~ drain region;
 - a gate electrode disposed on said substrate and being electrically insulated therefrom, said gate electrode positioned vertically between said ~~common~~ source region and said ~~common~~ drain region; and
 - a plurality of semiconducting nanotubes, each of said semiconducting nanotubes including a first end ~~physically and~~ electrically coupled with said ~~common~~ source region, a second end ~~physically and~~ electrically coupled with said ~~common~~ drain region, and a channel region extending vertically through said gate electrode between said ~~common~~ source region and said ~~common~~ drain region, said channel region being electrically insulated from said gate electrode, and said gate electrode configured to receive a control voltage effective to regulate current flow through said channel region of a respective one of said semiconducting nanotubes between said ~~common~~ source region and said ~~common~~ drain region.
2. (Currently Amended) The semiconductor device structure of claim 1 wherein said ~~common~~ source is composed of a catalyst material effective for growing said semiconducting nanotubes.
3. (Currently Amended) The semiconductor device structure of claim 1 wherein said ~~common~~ drain is composed of a catalyst material effective for growing said semiconducting nanotubes.

4. (Currently Amended) The semiconductor device structure of claim 1 further comprising:
an insulating layer disposed between said ~~common~~ drain and said gate electrode for electrically isolating said drain from said gate electrode.
5. (Currently Amended) The semiconductor device structure of claim 1 further comprising:
an insulating layer disposed between said ~~common~~ source and said gate electrode for electrically isolating said source from said gate electrode.
6. (Previously Presented) The semiconductor device structure of claim 1 wherein said at least one semiconducting nanotube is composed of arranged carbon atoms.
7. (Cancelled)
8. (Previously Presented) The semiconductor device structure of claim 1 wherein said at least one semiconducting nanotube is oriented substantially perpendicular to said horizontal plane.
9. (Cancelled)
10. (Previously Presented) The semiconductor device structure of claim 1 wherein said gate dielectric is disposed on said semiconducting nanotubes.
- 11-24. (Cancelled)
25. (Currently Amended) A semiconductor device structure, comprising:
a substrate;
an electrically-conductive first plate on said substrate;
an electrically-conductive second plate disposed vertically above said first plate;
an electrically-conductive layer disposed between said first and second plates;
~~at least one nanotube a plurality of nanotubes, each of said nanotubes having an end~~
electrically coupled with said first plate for increasing an effective area of said first plate, ~~said at~~

~~least one nanotube and each of said nanotubes~~ positioned in said electrically-conductive layer; and

a dielectric layer coating said length of each of said at least one nanotube nanotubes such that said ~~at least one nanotube is nanotubes are~~ electrically isolated from said electrically-conductive layer and said nanotubes are electrically isolated from said second plate.

26. (Original) The semiconductor device structure of claim 25 wherein said at least one nanotube has a conducting molecular structure.

27. (Original) The semiconductor device structure of claim 25 wherein said at least one nanotube has a semiconducting molecular structure.

28. (Original) The semiconductor device structure of claim 25 wherein said dielectric layer encases said at least one nanotube.

29-33. (Cancelled)